

IN THE CLAIMS

Claims 49 and 60 are amended as follows without prejudice or disclaimer of the subject matter thereof.

1-48 Cancelled

49. (Currently Amended) A method for the quantification of phosphoinositide kinase activity, which comprises: exposing a test solution containing an unknown amount of a target lipid, which wherein said target lipid is a phosphorylation product of a reaction between a phosphoinositide kinase that is endogenous or added to said test solution and a substrate phosphoinositide lipid that is endogenous or added to said test solution, to an analyte solution containing a protein having a phosphoinositide lipid recognition motif that interacts with said target lipid and a determined amount of a competing phosphoinositide lipid which is labeled by a non-radioactive signal, ~~then quantifying said target lipid by~~ measuring decreases of said non-radioactive signal of said competing phosphoinositide lipid, wherein said decreases of signal which correlates positively negatively with the quantity of target lipid, which is directly correlated to said phosphoinositide kinase activity.

50. (Previously Presented) The method according to claim 49, wherein said protein has specificity for phosphoinositide products of phosphatidylinositol 3-kinase (PI 3-Kinase) activity.

51. (Previously Presented) The method according to claim 50, wherein said protein contains an affinity tag fusion with said lipid recognition motif.

52. (Previously Presented) The method according to claim 50, wherein said protein is selected from an anti-phosphatidylinositol(3,4,5)phosphate antibody, an anti-phosphatidylinositol (3)phosphate antibody, a lipid recognition protein with specificity for phosphatidylinositol(3,4,5)phosphate, and a lipid recognition protein with specificity for phosphatidylinositol(3) phosphate.

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53. (Previously Presented) The method according to claim 49, wherein said phosphoinositide kinase is phosphatidylinositol 3-kinase (PI 3-Kinase), and said target lipid is a phosphorylation product of phosphatidylinositol 3-kinase (PI 3-Kinase) and a phosphoinositide substrate lipid.

54. (Previously Presented) The method according to claim 53, wherein said phosphorylation product of the reaction of phosphatidylinositol 3-kinase (PI 3-Kinase) with a substrate lipid is phosphatidylinositol(3,4,5) phosphate or phosphatidylinositol(3) phosphate.

55. (Previously Presented) The method according to claim 49, wherein said method is accomplished using a plate-based assay.

56. (Previously Presented) The method according to claim 55, wherein said assay is an enzyme linked immunosorbent assay (ELISA).

57. (Previously Presented) The method according to claim 55, which further comprises: prior to exposing said protein having a lipid recognition motif to a target lipid and a competing lipid, coating an assay plate with said competing lipid.

58. (Previously Presented) The method according to claim 57, wherein the coating step includes coating a streptavidin-coated plate with said competing lipid.

59. (Canceled)

60. (Currently Amended) A kit for the quantification of ~~phosphoinisotide~~ phosphoinositide kinase activity, which comprises:

a. an analyte solution comprising a determined ~~mount~~ amount of a competing phosphoinositide lipid which is labeled by a non-radioactive signal; and

b. a protein having a phosphoinositide lipid recognition motif that interacts with said competing lipid and with a target lipid found in a sample, wherein said target lipid which is a phosphorylation product of the reaction between the phosphoinositide kinase and a substrate phosphoinositide lipid; and instruction for using said assay kit according to the method of Claim ~~4~~49.

61. (Previously Presented) The kit according to claim 60, which further comprises a multi-well assay plate.

62. (Previously Presented) The kit according to claim 61, wherein said multi-well assay plate includes said competing lipid immobilized in the wells of said multi-well assay plate.

63. (Previously Presented) The kit according to claim 60, wherein said protein is selected from an anti-phosphatidylinositol(3,4,5) phosphate antibody, an anti-phosphatidylinositol (3) phosphate antibody, a lipid recognition protein with specificity for phosphatidylinositol (3,4,5) phosphate, and a lipid recognition protein with specificity for phosphatidylinositol (3) phosphate.

64. (Previously Presented) The kit according to claim 60, wherein said protein contains an affinity tag fusion with a pleckstrin homology domain.

65. (Previously Presented) The kit according to claim 64, wherein said phosphoinositide kinase is phosphatidylinositol 3-kinase (PI 3-Kinase).

66. (Previously Presented) The kit according to claim 61, wherein said multi-well assay plate includes said competing lipid immobilized in the wells of said multi-well assay plate by means of a streptavidin-coating on said wells.

67. (Canceled)